In the Claims:

1. (Currently Amended) A multi-stage variable orifice flow obstruction sensor for measuring a fluid flow in an enclosed housing, the sensor comprising:

a body member receivable within the enclosed housing, the body member defining an aperture therethrough;

a cover member engaged to the body member and disposed within the aperture, the cover member being movable between open and closed positions with respect to the aperture;

a flow-limiting obstruction member engaged to the body member and disposed within the aperture adjacent the cover member, the flow-limiting member being sized and configured to apply a generally opposing force to the cover member when the cover member extends to the open position and contacts the flow-limiting member, the flow-limiting being bendable in response to movement of the cover member; and

wherein a pressure differential of the fluid is sensed to measure the fluid flow therefrom.

2. (Original) The sensor of Claim 1 wherein the body member is concentrically receivable within the enclosed housing.

3. (Original) The sensor of Claim 2 wherein the body member is cylindrically configured.

4. (Original) The sensor of Claim 2 wherein the enclosed housing is a pipe.

5. (Currently Amended) The sensor of Claim 1 wherein the body member has an inner wall defining the aperture, the cover member and the flow-limiting member being engaged to the inner wall in a spaced apart and parallel relation to each other when the cover member is biased in the closed position.

6. (Original) The sensor of Claim 1 wherein the cover member is biased in the closed position and has a front cover member surface, the cover member being extendable towards the flow-limiting member when the fluid impacts the front cover member surface and flow through the aperture.

7. (Original) The sensor of Claim 6 wherein the cover member has a back cover member surface, the back cover member surface contacting the flow-limiting

member when the front cover member surface is impacted by the fluid flow reaching a threshold velocity.

8. (Original) The sensor of Claim 7 wherein the flow-limiting member has a lower flow-limiting member portion, the lower flow-limiting member portion being contactable by the back cover member surface when the fluid flow reaches the threshold velocity.

9. (Original) The sensor of Claim 7 wherein the flow-limiting member is urged toward the cover member when the back cover member surface contacts therewith so as to mitigate the extension of the cover member caused by the fluid flow.

10. (Original) The sensor of Claim 1 wherein the cover member and the flow-limiting member are each fabricated from a resilient material.

11. (Original) The sensor of Claim 1 wherein the body member, the cover member and the flow-limiting member are each fabricated from a metallic material.

12. (Original) The sensor of Claim 1 wherein the cover member and the flow-limiting member each comprises a plurality of slits for providing flexibility thereat.

13. (Currently Amended) The sensor of Claim 1 further comprising an anterior member engaged to the body member ~~in a manner as~~ at one side of the cover member to position the cover member between the anterior member and the flow-limiting member, the anterior member having an upper anterior member portion partially blocking the aperture.

14. (Original) The sensor of Claim 13 wherein the upper anterior member portion and the cover member collectively form at least one fixed flow orifice, the at least one flow orifice being sized and configured to allow the fluid to flow therethrough when a velocity of the fluid is not sufficient to extend the cover member towards the flow-limiting member.

15. (Original) The sensor of Claim 13 wherein the anterior member comprises at least one protrusion extending to the aperture so as to ensure that the cover member extends only towards the flow-limiting member.

16. (Original) The sensor of Claim 1 further comprising a pressure differential transducer connected to the enclosed housing, the pressure differential transducer being operative to generate an electrical signal corresponding to the pressure differential.

17. (Original) The sensor of Claim 16 further comprising a microprocessor for correlating the electrical signal to the fluid flow.

18. (Currently Amended) A multi-stage variable orifice flow obstruction sensor for measuring a fluid flow in an enclosed housing, the sensor comprising:

a body member concentrically receivable within the enclosed housing, the body member defining an aperture therethrough;

a cover member engaged to the body member and disposed within the aperture, the cover member being movable between open and closed positions with respect to the aperture;

an anterior member engaged to the body member adjacent to only one side the cover member, the anterior member having an upper anterior member portion sized and configured to partially block the aperture, the upper anterior member portion and the cover member collectively forming at least one fixed flow orifice for allowing the fluid with a non-zero flow rate to flow therethrough when the fluid flow fails to extend the cover member towards the open position; and

wherein a pressure differential of the fluid is sensed to measure the fluid flow therefrom.

19. (Original) The sensor of Claim 18 wherein the enclosed housing is a pipe.

20. (Original) The sensor of Claim 18 wherein the anterior member comprises at least one protrusion extending to the aperture so as to ensure that the movement of the cover member corresponds only with the fluid flow.

21. (Original) The sensor of Claim 18 further comprising a flow-limiting obstruction member engaged to the body member in a manner as to position the cover member between the flow-limiting member and the anterior member, the flow-limiting member being disposed within the aperture, the flow-limiting member being sized and configured to mitigate the movement of the cover member when the cover member extends to the open position and contacts the flow-limiting member.

22. (Original) The sensor of Claim 21 wherein the cover member contacts the flow-limiting member when impacted by the fluid flow reaching a threshold velocity.

23. (Original) The sensor of Claim 21 wherein the cover member and the flow-limiting member are each fabricated from a resilient material.

24. (Original) The sensor of Claim 18 further comprising a pressure differential transducer connected to the enclosed housing, the pressure differential transducer being operative to generate an electrical signal corresponding toe the pressure differential.

25. (Original) The sensor of Claim 24 further comprising a microprocessor for correlating the electrical signal to the fluid flow.

26. (New) A multi-stage variable flow obstruction sensor for measuring a fluid flow in an enclosed housing, the sensor comprising:

a body member receivable within the enclosed housing, the body member defining an aperture therethrough;

a cover member engaged to the body member, the cover member having a front surface and a back surface and being moveable between closed and open positions with respect to the aperture;

an anterior member engaged to the body member and adjacent to the front surface of the cover member; and

a flow-limiting member engaged to the body member and adjacent to the back surface of the cover member;

wherein the anterior member and the cover member collectively defining at least one fixed flow orifice such that before the velocity of the fluid flow exceeds a first non-zero velocity, the cover member is biased in the closed position with respect to the aperture;

the flow-limiting member being so disposed and configured that when the fluid flow exceeds the first non-zero velocity, the cover member starts bending towards the flow-limiting member until being in contact therewith, and when the fluid flow exceeds a second non-zero velocity, both the cover member and the flow-limiting member bend to an open position substantially parallel to the fluid flow, wherein the second non-zero velocity is faster than the first non-zero velocity.

In the Drawings:

Figure 2 has been modified as attached. In modified Figure 2, a broken view is included to show the slits 26 formed on the cover member 20.

In addition to Figure 2, a finalized version of Figure 1 to Figure 9 is respectfully submitted as attached.